

## PHILOS 31: LOGIC, FIRST COURSE

Summer Session TBD | Lectures: TBD | Lecture Hall: TBD

Instructor: Tristen Cardwell

Office: Dodd Hall 363

Office Hours: TBD

### Course description

This is a first course in symbolic logic. Symbolic logic is an extremely helpful tool which allows its user to identify the underlying structure of a sentence or argument, which in turn allows its user to better evaluate how good or trustworthy that structure is. In a world where argumentation is the main currency of reasoning, training in symbolic logic thus gives one a significant advantage. Naturally, logic also has important applications beyond philosophy, such as in programming and linguistics. In this course we will focus on developing foundational skills in the two most prominent basic logics today, i.e. propositional logic and predicate logic.

Learning outcomes: Students will develop fluency in propositional logic and first-order predicate logic as well as learn to carry out proofs in a natural deduction system. Students will be able to use these new tools to determine whether arguments are valid or invalid, as well as distinguish between validity and soundness.

### Textbook

Parsons, Terence. *An Introduction to Symbolic Logic*.

### Assessment

Homeworks	35%
Quizzes	10%
Midterm Exam	25%
Final Exam	30%

### Course Work Policy

Students must do the work required for each portion of the assessment *during the regular summer term*. If any portion of the course assessment is left unattempted by the end of the term without prior communication, a zero shall be assigned for the unattempted work and used to calculate a final grade. No incompletes will be given.

## Tentative Course Schedule

### Week 1

- Lecture 1 | Introduction to propositional logic; notation and interpretation of truth-functional connectives
- Lecture 2 | Validity and soundness; translations continued

### Week 2

- Lecture 3 | Introduction to proof system
- Lecture 4 | Proofs continued, learning theorems; practice midterm released

### Week 3

- Lecture 5 | Review
- Midterm Exam

### Week 4

- Lecture 6 | Introduction to predicate logic; notation and interpretation of quantifiers
- Lecture 7 | Notation and translations continued

### Week 5

- Lecture 8 | Assessing validity in predicate logic; proofs continued
- Lecture 9 | Assessing (in)validity; proofs continued, countermodels introduced

### Week 6

- Lecture 10 | Review
- Final Exam

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### Academic Integrity

Students are expected to know and to follow the university's guidelines for academic honesty. Academic misconduct can occur in a variety of ways, including (but not limited to) cheating, fabrication, and plagiarism. When in doubt about whether some academic practice is acceptable, ask your instructor for assistance. Always err on the side of caution. Any suspected violation of university policy regarding academic conduct will be reported directly to the Office of the Dean of Students, without exception.

UCLA's policies on academic and intellectual integrity can be found at:

<https://www.deanofstudents.ucla.edu/studentconductcode>

<https://www.deanofstudents.ucla.edu/Academic-Integrity>

### Academic Accommodations

All accommodations for the course must be registered through CAE. If you are already registered with the Center for Accessible Education (CAE), please request your Letter of Accommodation in the Student Portal. If you are seeking registration with the CAE, please submit your request for accommodations via the CAE website. Students with disabilities requiring academic accommodations should submit their request for accommodations as soon as possible, as it may take up to two weeks to review the request. For more information, please visit the CAE website ([www.cae.ucla.edu](http://www.cae.ucla.edu)), visit the CAE at A255 Murphy Hall, or contact us by phone at (310) 825-1501.

Note that CAE has changed their exam procedures. It is now the student's responsibility to arrange their accommodated exams with CAE ahead of time. Details found at (<https://cae.ucla.edu/testing-support>).